DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 82.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-021624
Date Inspected: 21-Feb-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: Westmont Industries

OSM Arrival Time: 700
OSM Departure Time: 1530
Location: Santa Fe Springs, CA.

CWI Name:	Ruben Dominguez	**CWI Present:**	☑ Yes ☐ No
Inspected CWI report:	☑ Yes ☐ No ☐ N/A	**Rod Oven in Use:**	☐ Yes ☐ No ☑ N/A
Electrode to specification:	☑ Yes ☐ No ☐ N/A	**Weld Procedures Followed:**	☑ Yes ☐ No ☐ N/A
Qualified Welders:	☑ Yes ☐ No ☐ N/A	**Verified Joint Fit-up:**	☑ Yes ☐ No ☐ N/A
Approved Drawings:	☑ Yes ☐ No ☐ N/A	**Approved WPS:**	☑ Yes ☐ No ☐ N/A
		Delayed / Cancelled:	☐ Yes ☑ No ☐ N/A

Bridge No: 34-0006
Component: Travelers

Summary of Items Observed:

This Quality Assurance Inspector Sean Vance arrived on site at Westmont Industries (WMI) in Santa Fe Springs, CA, to randomly observe the in process welding, QC inspection and non-destructive testing of the Travelers. Upon the arrival of the QA Inspector, the following observations were made:

Traveler Test Rack

This QA Inspector randomly observed WMI production personnel performing fitting, welding and cutting activities on various assemblies for the Traveler Test Rack.

E2/E3-EB Traveler

This QA Inspector observed WMI production welder Mr. Juan Jimenez (WID # 3059) continuing to perform Flux Core Arc Welding (FCAW) activities on the E2/E3-EB Traveler. This QA Inspector observed Mr. Jimenez performing the FCAW in all positions on plate and tube steel material, randomly throughout the shift.

This QA Inspector observed WMI production welder Mr. Eutimo Lopez (WID # 3035) continuing to perform Flux Core Arc Welding (FCAW) activities on the E2/E3-EB Traveler. This QA Inspector observed Mr. Lopez performing the FCAW in all positions on plate and tube steel material, randomly throughout the shift.

SAS-WB Traveler

This QA Inspector observed WMI production welder Mr. Larry Swanson (WID # 3058) performing Flux Core Arc Welding (FCAW) tacking activities on the SAS-WB Traveler, Frame assembly identified as 12 A141. This QA Inspector observed Mr. Swanson performing the activities in all positions on tube steel material, randomly

throughout the shift. Additionally, this QA Inspector observed WMI personnel Mr. Cesar Canales performing dimensional layout and fitting activities, on the above mentioned assembly. Additionally, this QA Inspector observed WMI production welder Mr. Daniel Grayum (WID # 3049) continuing to perform Flux Core Arc Welding (FCAW) activities on the SAS-WB Traveler. This QA Inspector observed Mr. Grayum performing the FCAW in all positions on tube steel material, randomly throughout the shift.

See attached picture below.

SAS-EB Traveler
This QA Inspector observed SE QC Inspector Mr. Ruben Dominguez performing Ultrasonic Testing (UT) on previously completed welds for the SAS-EB Traveler. In regards to the testing, this QA Inspector noted that the UT had been previously performed by Mr. Dominguez and no rejectable indications were found. In addition, this QA Inspector noted that the testing that was previously performed by Mr. Dominguez had been performed per a bootleg testing procedure, identified as SE-UT CT-D1.1-104 Rev. 5. In addition, this QA Inspector noted that the bootleg procedure had been previously revised after examination of a fabricated mock up, representing the weld joint configurations and the current testing being performed by Mr. Dominguez appeared to be per the revised bootleg procedure, identified as SE-UT CT-D1.1-104 Rev. 6. During observation, this QA Inspector observed Mr. Dominguez, utilizing what appeared to be a 5 MHz frequency,6 mm diameter transducer and a short index 70 degree wedge angle combination, to perform the shear wave inspection. This QA Inspector observed that the testing was being performed on a Complete Joint Penetration (CJP), AWS B-U2a-GF tube steel butt weld splice. During observation, this QA Inspector observed Mr. Dominguez performing the testing on four sides of the weld joint and appeared to be testing at 6 db over calibrated reference level. This QA Inspector observed that the scanning pattern being utilized by Mr. Dominguez appeared to be in accordance to AWS D1.1 2002, Figure 6.24. Upon completion of the four sides, Mr. Dominguez then explained to this QA Inspector that no rejectable indications were found. This QA Inspector then observed Mr. Dominguez proceed to test the four radius corners of the above mentioned weld joint. Initially, this QA Inspector observed Mr. Dominguez add what appeared to be 20 db additional above calibrated reference, to perform the testing on the radius corners. This QA Inspector noted that per the revised bootleg testing procedure, when conducting examination of the radius corners of tube steel products, a contact correction must be established by bringing the root side drilled hole indication from the mock-up to an equivalent of the 8 mm side drilled hole as reference for this area and then add 6 db for scanning. During observation, this QA Inspector noted that the above mentioned transducer and wedge combination was being utilized by Mr. Dominguez to perform the testing on the radius corners. Upon completion of the radius corners, Mr. Dominguez explained that no rejectable indications were found. Throughout the shift, this QA Inspector observed Mr. Dominguez performing UT in the same manner as mentioned above, on previously tested and accepted welds, utilizing the revised bootleg testing procedure. Near the end of the shift, Mr. Dominguez explained that no rejectable indications were found and applicable Ultrasonic Testing reports will be completed. This QA Inspector noted that the above mentioned testing, appeared to be in compliance to the revised bootleg procedure, SE-UT CT-D1.1-104 Rev. 6.

See attached picture below.

This QA Inspector randomly observed that Smith Emery QC Inspector Mr. Ruben Dominguez was present, during the above mentioned welding and fitting activities. During random observation, this QA Inspector observed that the applicable WPS's and copies of the shop drawings, appeared to be located near each work station, where the

above mentioned welding and fitting activities were being performed. This QA Inspector randomly verified that the consumable material, utilized during the welding appeared to be in compliance with the applicable WPS and that the above mentioned welders were currently qualified for the applicable process and position of welding. This QA Inspector randomly observed QC Inspector Dominguez verifying the in-process welding parameters, including voltage, amperage, pre-heat and travel speed and the parameters appeared to be in compliance to the applicable WPS. This QA Inspector observed that the activities mentioned above, appeared to be in compliance with the contract requirements and this QA Inspector observed no non-conforming issues, on this date. This QA Inspector continued to perform courtesy preliminary reviews of WMI Weekly Weld Reports, prior to WMI formally submitting to Caltrans for review.

Summary of Conversations:

As noted above.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Vance,Sean	Quality Assurance Inspector
Reviewed By:	Edmondson,Fred	QA Reviewer